UNIVERSITY OF WEST ATTICA
SCHOOL OF HEALTHCARE SCIENCES
PHYSIOTHERAPY DEPARTMENT

ABSTRACT OF DOCTORAL DISSERTATION

GEORGIOS PLAKOUTSIS

ATHENS 2021

Title: The Effect of Motor Imagery on Balance and on the Fear of Re-Injury in professional Football Players with Ankle Sprain Grade II.

Abstract

Football is one of the most famous sports in the world, recording an explosive increase in the annual number of athletes participating at a professional level. The cost of injuries both financially and competitively is very burdensome for football teams. The average recovery time of a serious lateral ankle sprain injury in a professional football player is 61 days while in a moderate injury it is 28 days.

Ankle sprains in elite football players are directly linked to multiple post injury complications. The rehabilitation process of a professional football player and the return to play period after an ankle sprain, are variables that are difficult to predict with accuracy. Although, to date research studies have focused on the predisposing factors that cause ankle sprains, limited attention has been paid to the psychological state experienced by the professional football player before his return to competition.

Fear of re-injury is one of the most common psychological responses, especially in highly competitive professional athletes. The use of Motor Imagery (MI) as an adjunct psychological intervention in rehabilitation programmes has been considered as an effective method in reducing the levels of fear of re-injury, emotional stress and pain, while at the same time encouraging injury healing and increasing athletic performance. The purpose of this dissertation is to investigate the effect of Motor Imagery (MI) on static and on dynamic balance and on fear of re-injury in professional football players with ankle sprain grade II, who are in return to play stage of rehabilitation.

References

- Abassi, M., Bleakley, C., Whiteley, R. (2019) Athletes at late stage rehabilitation have persisting deficits in plantar–and dorsiflexion, and inversion (but not eversion) after ankle sprain, *Physical Therapy in Sport,* 38, pp. 30–35.
- Bailey, D., Firth, P. (2017) Does kinesiology taping of the ankles affect proprioceptive control in professional football (soccer) players?, *Physical Therapy in Sport,* 25, pp. 94–98.
- Forsdyke, D., Smith, A., Jones, M., Gledhlll, A. (2016) Psychological factors associated with outcomes of sports injury rehabilitation in competitive athletes: A mixed studies systematic review, *British Journal of Sports Medicine,* 50 (9), pp. 537–544.
- Hardwick, R., Caspers, S., Eickhoff, S., Swinnen, S. (2018) Neural correlates of actions: comparing meta–analyses of imagery, observation, and execution. *Neuroscience & Biobehavioral Review,* 94, pp. 31–44.
- Hsu, C., Meierbachtal, A., George, S., Chmielewski, T. (2017) Fear of reinjury in athletes: Implications for rehabilitation, *Sports Health,* 9 (2), pp. 162–167.
- Jensen, S., Ivarsson, A., Fallby, J., Dankers, S., Albe, A. M. (2018) Depression in Danish and Swedish elite football players and its relation to perfectionism and anxiety. *Psychology of Sport and Exercise,* 36, pp. 147–155.
- Kanthack, T., Guillot, A., Saboul, D., Debarnot, U., Rienzo, F. (2019) Breathing with the mind: Effects of motor imagery on breath–hold performance, *Physiology & Behavior,* 208, pp. 1–7.
- Long, Z., Wang, R., Han, J., Waddington, G., Adams, R., Anson, J. (2017) Optimizing ankle performance when taped: Effects of kinesiology and athletic taping on proprioception in full weight–bearing stance, *Journal of Science and Medicine in Sport,* 20 (3), pp. 236–240.
- Moran, A., Guillot, A., Maclntyre, T., Collet, C. (2011) Re–imagining motor imagery: Building bridges between cognitive neuroscience and sport psychology. *British Journal of Psychology* 103 (2), pp. 224–247.
- Mouthon, A., Ruffieux, J., Walchli, M., Keller, M., Taube, W. (2015) Task–dependent changes of corticospinal excitability during observation and motor imagery of balance task. *Neuroscience,* 303, pp. 535–543.
- Multhaupt, G, Beuth, J. (2018) The use of imagery in athletic injury rehabilitation. A systematic review, *German Journal of Sports Medicine,* 8 (3), pp. 57–63.

- Podlog, L., Eklund RC. (2007) The psychosocial aspects of a return to sport following serious injury: a review of the literature from a self-determination perspective. *Sports Psychology and Exercise*, 8, pp. 535–66.
- Qader, A. M., Zaidan. B. B., Zaidan. A A., Ali. S. K., Kamaluddin. M. A., Radzi. W. B. (2017) A methodology for football players selection problem based on multi–measurements criteria analysis, *Measurement,* 111, pp. 38–50.
- Rodrigues, K., Soares, R., Tomazini, J. (2019) The influence of fatigue in evertor muscles during lateral ankle sprain, *The Foot,* 40, pp. 98–104.
- Sacheli, L., Zapparoli, L., Preti, M., Santis, C., Pelosi, C., Ursino, N., Zerbi, A., Stucovitz, E., Banfi, G., Paulesu, E. (2018) A functional limitation to the lower limbs affects the neural bases of motor imagery of gait. *NeuroImage: Clinical,* 20, pp. 177–187.